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THE RELATIONS OF PSYCHOLOGY TO
PHILOSOPHY

THE RELATIONS OF STRUCTURAL AND FUNCTIONAL PSYCHOLOGY TO PHILOSOPHY

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THE tendencies which have contributed to render psychology so largely independent of philosophy are for the most part identical with those which have brought it under the guiding influence of biology. The prevalent disposition to model psychological procedure upon biological patterns is a conspicuous expression of the force of this influence and one which has led to some interesting anomalies in current psychological usages. When one undertakes to treat the mind as an organism, it is natural to suppose that one may adopt the practice of the biological sciences and proceed to the construction of a mental anatomy, dealing with the facts of psychical structure, and a mental physiology, dealing with psychical function. Indeed, this is apparently the precise program which many of our contemporary psychologists attempt to execute. The legitimacy of the distinction between the structure and the function of consciousness is assumed as essentially self-evident. In view of this fact it is not without significance that psychologists should have failed to follow more consistently the example of the biologists in the development by the latter, as relatively independent sciences, of morphology and anatomy, on the one hand, and physiology, on the other. Certainly no psychologist has as yet attempted either a purely structural or a purely functional account of consciousness. Moreover, there is commonly no disposition to countenance the ideal implied in such an undertaking, and in practice psychology appears as a science engaged with both the anatomy and the physiology of the mind. It is the purpose of the present paper to inquire into the nature and relations of these two phases of the psychological field and to point out certain consequences touching the status of psychology among the philosophical sciences, which seem involved in the conclusions we shall reach. It will be convenient to begin with a brief examination of the concept of psychical structure.¹

On the negative side it is clear that in psychology the term "structure" cannot refer to spatial relations, as it does in anatomy and morphology, nor has it often been thought necessary since Descartes's time to call in question the spaceless character of consciousness. The morphological cell and the gross structures of anatomy accordingly find no immediate and perfect analogues in the psychical organism. But con-

¹For typical authoritative statements of the scope and problem of psychology, as contemporary writers regard these, see WUNDT in the *Philosophische Studien*, Vol. XII (1896), pp. 1 ff.; also MÜNSTERBERG, *Aufgaben und Methoden der Psychologie; Grundzüge der Psychologie*, Vol. I, pp. 1-190, *passim*. Professor Münsterberg's exposition in the *Grundzüge* is too elaborate to permit of ready articulation with the common formulæ and too recent to

allow of confident condensation. The independence of psychology from philosophy is ably maintained by Dr. SCRIPTURE in an article entitled "The Problem of Psychology," in *Mind*, Vol. XVI (1891), pp. 305-26.

There is probably no more convenient statement of the generally accepted views concerning the relations of the philosophical sciences to one another than is afforded by LADD's *Introduction to Philosophy*.

consciousness does report of itself a certain complexity of content revealed in the form of distinguishable conscious qualities. The physiological and the psychological organism have this point in common, then, that both are complex and thus describable (potentially) in terms of their constituent factors. To speak of the structure of the psychical organism is simply a convenient mode of indicating this fact of complexity. This, however, is the sole particular in which on the positive side the analogy with organic structure is really applicable to consciousness. Even this application requires some limitation, as we shall presently see.²

The situation comes clearly to view the moment we examine a specific instance of alleged psychical structure. When sensation, for example, is cited as a structural element of consciousness, as it is by many modern writers, the usual implication is that it represents a qualitatively irreducible psychic datum roughly comparable to the atom of an earlier generation of physicists.³ Such a psychical element as this evidently offers, even upon casual inspection, sufficiently important distinctions from the structural constituents of anatomy and morphology to make the two very imperfect counterparts of one another. That the one element is spatial in character and the other is not we have already remarked. Moreover, the one element represents a relatively durable entity, the other does not. The sensation has at best (*pace* Professor Münsterberg) an existence covering a moment or two of time. Furthermore, it is reasonably certain that the morphological element, when actually obtained, is what it pretends to be, *i. e.*, a real portion of the organism of which it is supposed to be a constituent. Sensation, on the other hand, is by general consent admitted to be in a measure an artifact. At all events, it seems to be commonly agreed that the entire analytical process by means of which consciousness is resolved into its elements is of a vicarious character, resulting in the attainment of symbolic representatives of the components of actual experience, but not in the securing of the prototypes themselves. Certainly the limitations of this analytic procedure through which the structural components are discerned is in need of most careful scrutiny from the standpoint of what Professor James calls the "psychologist's fallacy." For it seems possible that the experience of normal psychical life, as distinct from the psychologist's experience, is only in a mediate secondary way complex. The complexity commonly manifested by states of consciousness is a complexity of reference beyond the psychical moment,

²The ablest defense of structural psychology with which I am acquainted will be found in an article by PROFESSOR E. B. TITCHENER, entitled "The Postulates of a Structural Psychology," *Philosophical Review*, Vol. VII (1898), pp. 449-65. In connection with this should be consulted the two acute and cogent papers of Professor W. Caldwell, who under the guise of a critique upon Professor Titchener aims a number of powerful shafts at the weak points in the armor of presentationism: CALDWELL, "Professor Titchener's View of the Self," *Psychological Review*, Vol. V (1898), pp. 401-8; "The Postulates of Structural Psychology," *ibid.*, Vol. VI (1899), pp. 187-91.

The position of phenomenalism in psychology finds its

strongest advocate among English writers in Bradley. Cf. "A Defense of Phenomenalism in Psychology," *Mind*, N. S., Vol. IX (1900), pp. 26-45. A trenchant critique of this type of view in which Münsterberg appears as whipping-boy is to be found in SETH's *Man's Place in the Cosmos*. A useful paper discussing matters germane to these is that of MISS CALKINS, "Psychology as Science of Selves," *Philosophical Review*, Vol. IX (1900), pp. 490-501.

³Cf. upon this point and upon the whole question of the description of psychical contents, MÜNSTERBERG, "Psychological Atomism," *Psychological Review*, Vol. VIII (1900), pp. 1-17.

rather than a complexity felt as inherent in consciousness itself. Viewed dynamically from without, consciousness is multipolar; viewed dynamically from within, as regards its feeling, it is ordinarily unipolar. Such a structural element as sensation simply represents the psychologist's device to express the fact that consciousness, when viewed retrospectively, does not appear homogeneous, and that among the unhomogeneous qualities which are thus distinguishable, certain ones appear to be incapable of further analysis, sensation being among these irreducibles. Whether we agree with Professor James that the analysis of perceptual experience into sensations is merely an analysis of the objects to which the perception refers, or whether we agree with Mr. Stout in his contention that our analytic distinctions are representatives of undistinguished differences in the original experience under consideration, it is at least clear that sensation is no discrete psychical entity compacted with other similar entities into the complex we call perception.⁴ Moreover, when we rigorously distinguish the non-introspective experience, which belongs to everyday life from the post-mortem type of experience, with which the psychologist commonly deals, we find, as we have previously intimated, that the significance of the structural elements of consciousness is increasingly circumscribed and artificial. This is true even on the basis of the view which regards introspection as essentially a constructive process, producing a novel state of consciousness, which serves to represent ordinary experience. This conclusion must not be interpreted as a challenge to the tenability of every implication of the concept of psychical structure. It is intended simply to emphasize the disparity between this psychological form of the structure concept and that current in biology. As has been pointed out, the concept of psychical structure extends only to the implication of a specific kind of complexity. Beyond this it is irrelevant and inapplicable.

That the biological idea of function is applicable in a general way to the life of consciousness is hardly open to question. The precise lines of classification sometimes employed in biology, *e. g.*, functions of adjustment to the external environment, functions of internal organic metabolism, functions of reproduction, etc., may not be immediately available, but the general biological notion of organic activity certainly requires no essential transformation. The point which does, however, warrant a few words concerns the structural implications of certain psychological terms commonly employed to indicate functions, for example, "judgment." As the main point, which we desire to bring out in the remainder of the paper, does not hinge upon this consideration, we shall dismiss the matter with a somewhat cursory comment.

It will undoubtedly be admitted that every description of function involves, tacitly at least, some reference to structural elements, just as the actual functions themselves involve structures. Thus, judgment as an act will be allowed to involve factors usually called structural, such as images, for example. That judgment itself in its totality as a psychical event is also a structural component of consciousness, is not so likely to be

⁴It will be remembered that much of the criticism upon the significance of Weber's law issues in precisely this conclusion.

admitted. To be sure, so high an authority as Brentano has accredited to judgment the position of a psychological ultimate, but Brentano's whole view is essentially of a dynamic and functional character, and his ascription of this position to judgment could not without more ado be cited as in any way a claim for the structural character of the process. But if we direct our attention to actual psychical experience in its felt immediacy, the evidence justifying the view that judgment has a structural significance for consciousness is quite as good as that available for the assignment of the image to the ranks of psychical structures. If it be said that judgment is complex and that the image is relatively simple, we shall not deny this, but simply insist that we are under obligation to remember the limitations previously noted concerning the real meaning of complexity in states of consciousness. If the analogy of the psychological element with the biological cell, for instance, were altogether tenable, judgment, supposing it to be structural at all, might then conceivably enough figure as the counterpart of a tissue or a gross organ. But we have already observed the defects in these analogies, and, in point of fact, the judgment as a time-occupying process is not *merely* synonymous with the psychical elements capable of analysis out from the matrix represented by it. In its entirety it presents, when compared with the image, a unique segment, or phase, of consciousness, which can with propriety be regarded as structural. Indeed, it is on the whole a truer representative of psychical structure than the image, because it is less of an abstraction than the image, less remote from actual conscious experience. This is possibly but a cumbrous way of contending for a specific *quale* characterizing judgment in distinction from other psychical events. In any case, we have now devoted all the space to the matter which is appropriate and we may sum up the position we wish to set forth in this way: Many psychical processes ordinarily regarded as distinctly functional, *e. g.*, judgment, not only involve such elements as are commonly conceded to be structural, but are in themselves events possessing unique structural attributes.

Whether or not we agree to this view of the nature of judgment, it is certainly a suggestive fact concerning the general relations of structure and function in mental life, that the same terms are so often used indifferently to indicate either the one or the other. Probably the terms "sensation," "image," and "affection" are as widely used in a structural sense as any that one could select. Yet each of these is also used in a functional sense. Thus, sensation is described as the psychical function by means of which the organism is first brought into contact with its environment. Again, the image is spoken of as the conscious process by which the world of objects and relations is symbolized and manipulated. *A fortiori* should we find a similar thing true of those psychological terms occasionally, but less commonly, regarded as structural, *e. g.*, "conation." Now, were there nothing beyond the mere verbal identity in the terms applied to structures and functions, one might regard this fact simply as evidence of linguistic inadequacy, implying nothing positive as to the relations among the psychical facts themselves. That our available terminology is defective no one can question, but this consideration is far from affording a complete explanation of the circumstance

referred to. Fortunately our biological bias, which prepares us for almost any kind of intimacy in the relations of the structure-function elements, offers us a clue to the correct interpretation of the facts. Not only are we reminded in biology that every function involves a structure, an organ, for its execution, but we are also informed that these functions modify the structures. Especially is this true of the molecular arrangements in nervous tissue. In psychology it might almost be said, that the functions produce the structures. Certainly, so far as we may be considering any specific structural content of a state of consciousness, *e. g.*, a sensation (in distinction from the general fact of content), we shall always find that this sensation is determined by the demands made upon the organism by the environmental situation, *i. e.*, that it is functionally determined and that it will vary with each specific situation with which the organism has to cope. One may of course hypostatize this sensation and, dissociating it from its particular surroundings, regard it as a type of a relatively static structural element, for which specific function is a secondary and unimportant consideration. But the actual sensory experience, which constitutes the prototype of this hypostatized sensation, is not only capable of being viewed as an expression of functional activities, it cannot be correctly viewed nor accurately described in any other way. It is never a mere sensation in general. It is always this *specific* sensation produced by certain particular, momentary organic conditions. The forty thousand, more or less, of sensory qualities, which the psychologist describes, have no actual existence apart from his description, save when the exigencies of experience call them into being, *i. e.*, when there is functional demand for them. It appears, therefore, that the fundamental nature of functions, which biology discloses, is even more in evidence in psychology, where structure and function represent simply two phases of a single fact.

The considerations which we have thus far canvassed suggest that our psychology stands in need, not so much of a firmer foundation for the distinction between psychical structure and psychical function, as it does of a further development of both branches of the inquiry based upon the distinction and a clearer recognition of the real relation between the two. Upon the teleological nature of the distinction it is, perhaps, unnecessary to comment. But certainly the present categories recognized as respectively structural and functional occasionally overlap, and thus emphasize the necessity for further clarification of their relations.

Despite the unquestioned applicability to consciousness of the idea of function, any psychology which calls itself functional is still in certain quarters viewed with a slight distrust. It is thus sometimes asserted, as an evidence of the superior reliability of the results of structural psychology compared with those of functional psychology, that the former has settled down upon the elementary nature of sensation and affection, for example, with far greater finality (although this finality is a trifle precarious) than functional psychology has attained with reference to any of its categories. Taken at its face value, this contention is of a somewhat specious character. As a matter of practical wisdom in the distribution of one's energies at the present

moment, it may be that more certain rewards are to be anticipated from a pursuit of psychological analyses of the structural variety than from those of a functional character. But the evidence offered points less directly to the psychological superiority of the structural methods of work, than it does to the differences in complexity among the several kinds of psychical attributes which the psychologist finds himself under obligation to analyze, describe, and, if possible, explain. Plenty of parallel cases might be cited from the biological sciences. Thus, for example, the anatomy of the lungs and the physiology of respiration have been much more completely worked out than the corresponding treatments of the brain. Notwithstanding the limitations upon the analogy of psychical with organic structure, one may view the asserted superiority of structural psychology over functional psychology, if this superiority be conceded, as affording in general simply one more instance of the tendency illustrated by the history of all science, *i. e.*, the tendency toward the development of scientific knowledge concerning the static and structural phases of the cosmos, prior to the attainment of such knowledge about its dynamic and functional features. However the facts may stand as regards the precise validity and import of this claim for structural psychology, there can be no reasonable doubt that the smaller the segment of consciousness one transfixes under his introspective objective, the easier it is to emphasize the structural features of such sections, and the harder it is, because of the greater actual remoteness from life conditions, to do justice to their functional attributes. It will be remembered in this connection that the structural elements upon which there is widest agreement, *i. e.*, sensation and affection, are the products of elaborate analytical simplification, corresponding in no exact sense to any actual moment of conscious experience. The converse fact is equally obvious. The more complex the psychosis under examination, the more readily is one's attention diverted to the functional activity involved, and the more difficult does it become satisfactorily to distinguish the structural characteristics of the complex. The psychology of attention affords an illustration of the case in point.⁵

So long as psychology confines its examination to the structural aspects of consciousness, it seems to have a clear field and to be in no danger of trespass upon other branches of inquiry, either philosophical or biological. But the moment that functional problems are attacked certain difficulties appear concerning the severance of psychology from the several other departments of philosophical investigation.⁶

⁵Criticisms upon the value of psychology for educational practice, etc., which rest upon the asserted remoteness of the psychologist's facts from the actual facts of psychical experience, obviously hold true, if anywhere, in largest measure when directed against structural psychology. Indeed, I have yet to meet any criticism of this type which appeared to me apposite when directed against the possibilities of functional psychology. The reasons for the retarded development of functional psychology we have already mentioned.

⁶I do not know of any adequate formulation of the program of a functional psychology. The thing itself is about one on every hand in the contemporary psycho-

logical literature, but it is, perhaps, too young to have become fully self-conscious and so has escaped the incubus of a creed. The following references, however, will all be found valuable in clarifying the scope of such an undertaking: EBBINGHAUS, *Grundzüge der Psychologie*, Vol. I, pp. 161-9; STOUT, *Analytic Psychology*, Vol. I, pp. 1-50, and *passim*; DEWEY, "The Reflex-Arc Concept in Psychology," *Psychological Review*, Vol. III (1896), pp. 357-70; "Principles of Mental Development," *Transactions of the Illinois Society for Child-Study*, 1899, pp. 65-83; ELLWOOD, "Prolegomena to Social Psychology," *American Journal of Sociology*, 1899, pp. 807-22.

If the contention once be granted that psychology cannot succeed in its effort to determine what consciousness is as regards its make-up without a determination of what consciousness does, the further inference is inevitable that psychology must proceed to inquire into the how and why of conscious operations. In other words, any *complete* statement as to what operations consciousness really performs necessarily involves an account of how and why these operations are executed. The practice of physiology illustrates and confirms this position. A description of the path traversed by a blood corpuscle in its circulatory cycle would in so far be a statement of what occurs in circulation. But how the results which arise from the circulation are produced would be entirely to seek, and no one would for an instant consider such an account as exhaustive or satisfactory. But if one does go farther, it is patent that in asking how the results mentioned do come to pass, one is simply investigating what other operations are involved. It is not only in the Hegelian logic, therefore, that the adjective and the adverb reveal a dialectical interplay. In physiological and functional problems the question "how" is practically identical with the question "what." Moreover, any such physiological formulations of function as actually are met with contain a proximate response to the question "why." A complete account of physiological activities would clearly include answers to each of the questions, what, how, and why particular functions are operative. Accordingly, if functional psychology is in reality a mental physiology, we may expect to find it engaged with the search for answers to just these same questions as they apply to the life of consciousness.⁷

Now let us examine briefly, in the light of the preceding considerations, what relations are sustained by psychology to the normative philosophical disciplines. Theoretically it is a matter of indifference where we begin, practically it will be convenient to take up logic first.

Logic and psychology obviously have their immediate point of contact in the cognitive processes. The psychological problem of cognition is generally supposed to be solved when an account has been given of the constituents of the knowledge process and of the modes in which under the actual conditions of practical life these processes function. It has been usually maintained that for psychology the truth or falsehood issuing from any cognitive process was a matter of wholly secondary consequence, and on these lines a practical boundary between psychology and logic has been established. Logic, on the other hand, anyhow the formal logic, is commonly assigned the investigation of just these same cognitive processes, but now from the standpoint of their consistency, their production of valid conclusions, their avoidance of fallacy.⁸ The development of the inductive logic has in recent years issued in an examination of this same principle of consistency and truth, as it is involved in the

⁷ The force of the theory for which I am contending appears to me to be indirectly supported by the considerations set forth in W. McDUGALL's suggestive articles entitled "Contribution toward an Improvement in Psychological Method," *Mind*, N. S., Vol. VII (1898), pp. 15-33, 159-78, 364-87.

⁸ A brief and effective exposition of a frequently ac-

cepted view concerning the relations of logic and psychology is given by G. M. STRATTON in an article entitled "The Relation between Psychology and Logic," *Psychological Review*, Vol. III (1896), pp. 313-20. See also a criticism of Stratton's paper in the interests of "Rational Psychology," by G. H. HOWISON, *ibid.*, pp. 652-7.

process of discovery rather than in proof. Many eminent logicians take great pains to emphasize the radical distinction between psychology and logic. Yet an examination of their treatises upon logic discloses a large amount of space devoted to analyses and discussions that are almost purely psychological, in the sense in which this implies that they are concerned with the content of the logical processes and not primarily with the determination and formulation of canons of thought. The modern theory of the judgment, which is so central in contemporary logic, is a case in point. The examination of the concept is another, and the list might be carried out at considerable length. This fact has sometimes been explicitly recognized and formulated in the statement that logic borrows its raw material, viz., the facts of the cognitive life of consciousness, from psychology. There is, however, seldom any economizing of space on this score.⁹

If psychology could confine itself exclusively to structural problems, there would seem to be no theoretical difficulty in distinguishing its field from that of logic. Conversely, so long as logic rigorously confines its inquiry to the problem of determining the conditions under which valid thought processes arise, it need not traverse any territory pre-empted by structural psychology, even though in the execution of its task it employs psychological material—a material, be it said, which contains, as logic actually receives it, both structural and functional elements. But any systematic development of a functional psychology must inevitably result in the creation of a logic. This is, forsooth, precisely what logic is. Indeed, logic has often been called the applied psychology of reasoning. But it is more than that, for that would only apply strictly to the cases where, as in rhetoric, the subject is treated with reference merely to improvement in the exercise of argument, proof, or investigation. The essential identity of functional psychology and logic will appear more conclusively from the considerations which we shall next examine.

The tendency of modern logic, if one may trust such generalizations, certainly seems to be increasingly toward the placing of the criterion of validity and truth within the limits of the purely practical. Truth as the Absolute is chiefly a possession of the metaphysician and epistemologist. Truth or consistency, either of them, from the logician's point of view is primarily resident in practice. The formulation which works in practice is the logically true and valid thing. The truth which can in some way be verified in experience is the logician's type of truth. The constant appeal for a criterion is to the facts of practice and not to a transcendental standard of excellence apart from these concrete details of actual life.¹⁰ Even in the principles of formal

⁹ In STUART'S great work on logic two-thirds of the first volume is given over to an essentially psychological analysis of judgment and concept. Similarly in WUNDT'S *Logik* more than two hundred and fifty pages of the first volume are devoted to an examination of conscious processes which differs only in thoroughness from that which the ordinary psychological text affords. Whether one classifies the work of HEGEL as *The Theory of Knowledge*, as logic or as epistemology, it is equally interesting to remark that the earlier chapters are almost wholly psychological in character.

¹⁰ One of the most luminous discussions of the philosophical consequences of this logical conception is afforded by W. JAMES'S address "Philosophical Conceptions and Practical Results" (delivered before the Philosophical Union of the University of California). Professor James announces himself as the prophet of C. S. Peirce, whose work in logic is so widely known. The special doctrine in question is set forth in a paper in the *Popular Science Monthly* for 1878, under the title "Illustrations of the Logic of Science."



logic, such as the laws of contradiction and excluded middle, the actual leverage for the doctrine is always obtained by reference to the objective world of everyday experience. This is as true of the significance attaching to deductive as to inductive procedure. It has, moreover, always been true of the plain man's manner of thinking. Ulterior and supposedly absolute guarantees of truth have never stood in his presence, when confuted by the facts of practice. Although the plain man is not of much consequence when he attempts consciously to philosophize, his practical procedure is nowadays gaining some repute as an arbiter in philosophic disputes. He is not introduced at this place as a demonstration, but simply as an additional piece of presumptive evidence regarding the justice of the balance by which modern logic is increasingly inclined to weigh truth.

The warrant for this insistence upon the category of the practical is of course peculiarly obvious and fundamental in the foundation of inductive and investigatory procedure. But the ultimately correlative character of deduction and induction renders the application of the category to deduction equally defensible. It is not, however, the practical as a mere category of the work-a-day-world which is implied here. At all events, much more than this is implied. The idea which is here at issue involves the larger dynamic conception of experience itself as a universe or system in which truth is ultimately synonymous with the effective, and in which error is not only identifiable with partiality and incompleteness, but particularly with that form of inadequacy which issues in the failure of practice, when conceived in its entirety.¹¹ The contemporary logical treatment of the judgment (in which modern logic seems to find its most characteristic mark) is essentially given over to an exposition of this function as a part of practice. The older severance of the reflective faculties, so called, from the activities of mere practice has yielded to a point of view in which reflection and ratiocination are not only thought of as possible contributors to practice, but as constituting themselves immanently and immediately most important instances of it. For this type of view constructive thought is practice in its most intelligently creative, formative stage. So far as modern logic has added anything to the achievements of the ancients, it is surely in just this protest, for which it stands, against the effort to treat the validity of thought as something capable of investigation and formulation apart from the actual facts of experience.

It is a far cry from all this, perhaps, to the complication of functional psychology with logic. But the point which it is sought to bring out is this, that logic in its search after the criterion of logical truth and consistency, its search for the principles of valid thinking, is intrinsically engaged in determining, not some purely abstract transcendental ideal, but the concrete principles of practice. The identity of this

¹¹ Interesting commentaries upon this general point of view will be found in the following places: ROYCE, *The World and the Individual*, First Series, pp. 265-342, Second Series, pp. 379 ff.; VENN, *Principles of Empirical or Inductive Logic*, pp. 32-6; LADD, *Philosophy of Knowledge*, p. 468; SCHILLER, "Axioms as Postulates," especially pp.

126-8, in STURT's volume of collected essays entitled *Personal Idealism*. Despite his protests against the doctrine, Mr. Bradley hardly succeeds in avoiding its meshes. Cf. BRADLEY, *Appearance and Reality*, pp. 184-96, 550. See also his *Logic*, pp. 18-21.

undertaking with certain problems currently accounted the exclusive possession of psychology (at least from the standpoint of functional psychology) now remains to be exhibited.

When it is said that the problem of psychology, so far as it deals with the cognitive processes, is confined to the investigation of what actually does occur in the knowledge-bringing operations, and in no way touches the question of what ought to occur, it is apparently implied that there is some absolute standard of consistency to which the rationalizing activities may conform, but often do not. Now, however this may be, in point of fact the actual account of reasoning and its subordinate processes, which are contained in our psychological text-books, are closely comparable with the statements one finds in the corresponding chapters of our logics. They are impartial descriptions of the supposed processes concerned in these phases of mental procedure. In treatises of both varieties the mechanisms of the inductive and deductive modes of thought are set forth, the evolution of the judgment and the relation of this to the concept are expounded, and, were it not for the fact that the authors generally call attention to the supposed distinction, one might read extended passages without the slightest suspicion of a radical difference between the logician's and the psychologist's analysis of cognition. To be sure, the psychologist usually foregoes an examination of fallacies and the logician commonly eschews any extended discussion of perception and imagination. But, despite such a nucleus of differences in the topics treated, the points of community already mentioned obstinately remain and refuse to yield to any interpretation which deprives them of their most obvious implication, *i. e.*, the implication that logic and one portion at least of psychology are really one. As we shall presently see, no effort to preserve the distinction that psychology and logic treat a common subject-matter from different points of view can be maintained, when functional psychology is allowed to enter the lists.¹²

If one adopts the view, as most psychologists do, that consciousness is not merely epiphenomenal, but is really an efficient agent in the furtherance of the life-activities of the organism (the view of common-sense), we must admit that one of the points at which consciousness is most obviously of value is presented in the cognitive functions. In the general mediation, represented by the cognitive processes, through which the individual recognizes the beneficial or the harmful and thereby regulates his conduct, it is not for a moment a matter of indifference whether or not the results of the exercise of these processes are true or false. Not only in the case of every-day practical problems is this true, but also in every possible case of reasoning, however abstruse and however remote from the immediate interests of the life-process. It is not primarily because such truth or falsehood may in its subsequent consequences be harmful or helpful, that we speak of the cognitive process as involving this category of organic value, although this is evidently one phase of the matter; but much more

¹² To illustrate the similarity of subject-matter and treatment which is revealed by our psychologies and logics, we may take the following recognized representatives and

compare the suggested passages: CREIGHTON, *Introductory Logic*, pp. 1-16, 290-73, 329-34; SULLY, *The Human Mind*, Vol. I, pp. 434-74; DEWEY, *Psychology*, pp. 202-34.

because the act itself in which such a conclusion is reached is an adjustment to environmental conditions conceived in their widest and truest aspect, and its truth or falsehood is simply another name for its successful or unsuccessful functioning in the total process of adaptation.

This brings us then to precisely the same point which we reached a moment ago in considering the tendency of logic. If psychology is permitted to discuss function at all—and we saw that, without being arbitrarily truncated, it cannot avoid so doing—the truth or falsehood of cognitive processes cannot be a matter alien to its boundaries, because such truth and falsehood are simply impressive names for relatively complete (*i. e.*, successful) and relatively incomplete (*i. e.*, unsuccessful) operations of adaptation. Whether false reasonings would in such a case form a chapter in functional pathology is entirely unimportant at this time. It does not appear that this would necessarily follow.

It has, perhaps, been made sufficiently clear in the preceding statement that there is in the view here advanced no necessary reference to immediate overt failure or success in the individual's adaptive activities. Such a result is, to be sure, often in evidence, but in the realm of the higher and more abstruse thought-processes it is often so veiled as to baffle confident detection. In such cases the doctrine we are here defending finds its application in the undeniable formation during all reflective activity of generally trustworthy or untrustworthy habits of mind. The evident deferment of the full and complete consequences in cases of this character cannot fairly be interpreted to the prejudice of the theory.

Unless one regards the cognitive function as a mere luxury of the organism, it is difficult to see how one can escape from the view just presented. If the knowledge-processes are of value to the organism, it obviously must be because of what they do. No one questions that they serve primarily to reflect and mediate the external world, and this they can only do effectively provided they distinguish the true from the false. It would seem fairly clear, therefore, that a functional psychology in any event, however the case may stand with a structural psychology, cannot possibly avoid a consideration of this aspect of the cognitive activities. But the problem to which this view leads is essentially identical with the accepted problem of logic.¹³

At the risk of tedious iteration, a brief résumé of the argument is here offered. Modern logic shows an increasing disposition to locate truth in practice, to make truth

¹³ Logics which, like Mr. Bradley's and Mr. Bosanquet's, include so much of the immanent criticism of the logical function in its entirety with so much of psychological analysis and so much of epistemological and metaphysical by-play, are of course peculiarly difficult to dispose of in any summary way. These writers (Mr. Bradley avowedly) have gone out exploring, from the logical problem as a center, into all the surrounding country, and they have unquestionably brought back with them most valuable spoils. But this general philosophical campaign, carried on under the banner of logic, makes it somewhat precarious to attempt treating its leaders as one might, if they had con-

fined themselves to the logical problem in its usual significance. I cannot, however, in any case sympathize with the implication contained in the second part of the title of Mr. Bosanquet's scholarly work. Logical doctrine proper is certainly not to be called morphological. Whatever is explicitly morphological in logic is in reality material borrowed from structural psychology. Indeed, Mr. Bosanquet practically surrenders his position by admitting that his morphology must include function. It is clear what he means, and equally clear that "morphology" is, therefore, not a felicitous word for his field.

a category, not of the solely or primarily transcendental, but rather of the distinctly immanent variety. Truth is thus something which belongs to the reflective faculty, not as this appears when abstracted from practice and made purely theoretical, but as it really is when viewed amid its normal surroundings, *i. e.*, a part, and an integral part at that, of the universe of practice. Concretely this tendency is exhibited in the treatment of the judgment, the concept, the deductive and inductive forms of inference. Psychology, accepting the common-sense view of consciousness as efficacious in determining the fate of the individual organism, locates the deliberative, and therefore controlling, factors of consciousness in the cognitive processes. It is consequently by means of the knowledge-processes that decisions of actual import are reached, and it promptly becomes a part of the attempt to understand how the adaptive activities of consciousness are carried on, to understand how truth and falsehood, consistency and inconsistency, practical success and practical failure are attained through the mediation of the various modes of consciousness. This is clearly true of any psychology which attempts to go beyond the mere elements of the process, and we have already seen the logical difficulty, if not impossibility, of stopping short at this point.

Let it not be supposed that there is any intention here to criticise the present provisional lines of distinction between psychology and the rest of philosophy. These lines are, to be sure, in some respects unsatisfactory. But our immediate interest is simply to show that the prevalent distinctions are even more practical and arbitrary than has commonly been confessed. For example, the statement that logic, ethics, and psychology treat an identical subject-matter, though from different points of view, gives a working differentia which has proved useful. But, if the contentions advanced in this paper are warranted, this description of the facts is certainly not accurate. A thorough-going and courageous functional psychology must ultimately issue in investigations which are nowadays the exclusive possessions of logic, ethics, and æsthetics respectively. A cursory account of the case as it stands in ethics and æsthetics may render clearer certain phases of the position we are considering. We may conveniently examine the case of ethics first.

We must at the outset disavow any intention to discuss those purely anthropological and historical considerations which are often and with much of propriety included in ethical doctrine. What we have in mind is the more exclusively philosophical inquiry into the nature of right and wrong, the good and the bad. Precisely as in the case of logic, we meet here with a large amount of material which is obviously psychological in nature. The earlier chapters in almost all the modern text-books on ethics are dedicated to an investigation of impulse, desire, conscience, motive, ideal, etc., from the standpoint of the actual psychological processes involved in these elements of the ethical life.¹⁴ All this is ostensibly carried on, however, to the end that we may

¹⁴The critical and constructive treatise and the student's text-book are both replete with psychology. Illustrative of the former is HODGSON'S *Theory of Practice*, in which almost all of the first volume is assigned to psycho-

logical considerations. MACKENZIE'S *Manual of Ethics* may represent the latter class. In this work one whole book (pp. 43-146) is explicitly reserved for discussions of psychological matters.

at length be able to describe what constitutes good and bad conduct. Now, logically considered, this mode of attacking the problem immediately suggests the localization of the good somewhere in actual practice, and not in a remote ideal which practice strives in vain to attain. Historically, too, the influences to which modern ethics has been exposed have led to emphasis upon the essentially social nature of the good and of the right. In this manner ethical value has come to be regarded, not simply as something which has significance for practice, not simply as something at which practice ought to aim, but as resident in practice itself and as constitutive of the universal element in practice. This tendency is as characteristic of Mr. Spencer and the evolutionary ethical writers as it is of the advocates of T. H. Green's way of thinking.¹⁵

Needless to say, this is a view peculiarly identified with the psychologist's standpoint. If cognitive consciousness is looked upon by him as constituting a medium in which are devised adjustments of a more adequate type than are mechanically provided for in the physiological organism, much more must he regard volition and its issuance in overt conduct as the crucially significant feature of the case. It is obvious to the point of platitude that consciousness, if it be valuable at all to the organism, must be so in volition. But supposing it valuable is equivalent to supposing it selective of the beneficial. When taken broadly, good and bad conduct are by the agreement of practically all contemporary ethical writers, however they express it, equivalent to Mr. Spencer's perfectly or imperfectly evolved conduct, to perfectly or imperfectly equilibrated individual and social influences, to the completest or most incomplete adaptation and development of the individual in a similarly developed society. Nor does this position necessarily involve an oversight of the insistent distinction between ethical and biological value.¹⁶ The distinction is, to be sure, transcended in this view, not, however, by denying it, but by exhibiting its full implications and foundations. Moral value gets expression, then, in practical values represented by the activities of the developing individual in the developing environment. Moral action thus becomes, like logical truth, the practically effective action as over against the partial and incomplete, which accordingly represent badness and error.¹⁷

The dilemma which emerges from these considerations is plain. Either we must suppress functional psychology, or else admit that the so-called ethical examination of the element of value in conduct—being in point of fact simply an examination of the condition of largest effectiveness in conduct—belongs in reality to the field of functional psychology; and we must admit, further, that a functional psychology which did

¹⁵ Compare SPENCER, *Data of Ethics*, chap. 3, and *passim*; ALEXANDER, *Moral Order and Progress*, pp. 97-111; DEWEY, *Outlines of Ethics*, pp. 95-102, 214-21; also *The Study of Ethics, A Syllabus*, pp. 17-26, 124-9, and *passim*; J. SETH, *Study of Ethical Principles*, pp. 258-82.

¹⁶ Cf. DEWEY, "Evolution and Ethics," *Monist*, Vol. VIII (1898), pp. 321-41. Among the most acute and penetrating analyses of the concept of value are to be mentioned the following: EHRENFELS, "Werththeorie und Ethik," *Viertel-*

jahrschrift für wissenschaftliche Philosophie, 1893, pp. 76-110, 200-266, 321-63, 413-75, and *System der Werththeorie*; MEINONG, *Psychologisch-ethische Untersuchungen zur Werththeorie*.

¹⁷The most searching analysis of certain phases of this general doctrine has been made by PROFESSOR ROYCE in his work entitled *The Religious Aspect of Philosophy*, especially pp. 449-60.

not give an account of these elements would be a bastard discipline and not what it pretended to be.¹⁸ The unavoidable coalescence of the problems of ethics and functional psychology is nowhere more obvious than in the realm of social psychology. This is not the place to attempt an exhaustive definition of the scope of this branch of psychological inquiry. But for the purpose in hand it is sufficient to refer to such investigations as Professor Baldwin has carried on. A large portion of his work entitled *Mental Development, Social and Ethical Interpretations*, might with equal propriety be classified as psychology or ethics. Nor does it escape the force of the dilemma to assert that social psychology is essentially a border-line field of inquiry, which merges with ethics on one side and with functional psychology on the other. A closer inspection of the facts will show that all psychological and ethical questions with which the sociologist concerns himself are fundamentally questions of how and why consciousness performs certain operations and what the results are, *i. e.*, are questions intrinsic to the conception of functional psychology. Again, as we said in connection with logic, it is not maintained that the present principle of demarcation between the two supposedly independent fields of investigation is especially prejudicial to the trustworthiness of the conclusions thus far reached by them. But the connection is surely more intimate and organic than is generally admitted.

The case of æsthetics is more complicated than that of either ethics or logic, because of the relatively inchoate condition of æsthetic doctrine. Whether we shall mean by the term "æsthetics" a criticism of taste, an attempt to formulate canons for the production of art, the philosophy of beauty, or an analysis of the psychology of æsthetic appreciation, is largely a matter of individual opinion or caprice. When used in connection with properly philosophical subjects, it would seem that the most appropriate meaning to assign the term is that in which it is equivalent to the scientific theory of value in feeling. This correlates it at once with logic, which is accredited to the examination of the value or validity in the knowledge-process, and with ethics, which is concerned with the case of value in conduct.¹⁹

Even the most formalistic of writers upon æsthetics feel it obligatory to give some account of the elementary psychological aspects of feeling.²⁰ This is in part a repetition, accordingly, of the situation which we found in current logical and ethical usage. In these discussions of the nature of feeling, and æsthetic feeling in particular, it is usually maintained that the value element in this phase of consciousness is immediate. Cognitive and volitional experiences, if valuable, are ordinarily regarded as being so because of some ulterior consequences which issue from them. Kant is, perhaps, the classical exponent of this view of the immediacy of the value in æsthetic

¹⁸The following citations will suffice to exhibit the incorporation of ethical material into psychological writings: BAIN, *Emotions and Will* (3d ed.), pp. 264-99, 440-504, and *passim*; DEWEY, *Psychology*, pp. 399-424; SULLY, *The Human Mind*, Vol. II, pp. 155-71, and *passim*; BALDWIN, *Feeling and Will*, pp. 205-33, and *passim*.

¹⁹A scholarly defense of æsthetics as being a normative philosophical science, and not a merely empirical account of certain phenomena of consciousness, is to be found in VOLKELT, *Ästhetische Zeitfragen*, pp. 195-222.

²⁰For example, ZIMMERMANN, *Allgemeine Ästhetik als Formwissenschaft*, chap. 1.

feeling.²¹ Strangely enough this doctrine is held by the writers who, if the principle were carried over and given its inevitable application in ethical experience, would reject it with asperity. "Art for art's sake" is the shibboleth which presents on the side of criticism and appreciation the same conception that is involved in this view of feeling. The adequacy of the theory evidently cannot be considered at this point. But granted once that feeling does have its essential value in itself, and it immediately becomes clear that it can only be understood when it is given its proper setting in the totality of conscious operations, *i. e.*, when it has been analyzed by a psychology of function. Much more is this true of any theory which locates the value of feeling outside itself. Now the moment that one inquires into the value of feeling and the criterion of such value, one is doing precisely what any functional psychologist must do. One cannot describe completely the function of feeling in organic life without attempting to make out how it operates and why. When these questions have been answered, its value will already have been exhibited and the reasons will have been made plain for the lesser or greater desirability which we recognize as attaching to various forms of it.²²

The intrinsic unity of the problems propounded by æsthetics and functional psychology is strikingly illustrated by certain recent attempts to give, in connection with the general description of affective consciousness, a biological or physiological account of the significance and origin of æsthetic feeling.²³ The conception of feeling as representing the immediate response of the organism in its entirety to various kinds of stimuli, and the further conception of this response, as indicative of the increased or decreased vitality of the organism, affords a practical instance of how a functional psychological doctrine of feeling must in the nature of the case include an account of the phenomena commonly called æsthetic, and how it must traverse the question of value in feeling, if it once enters this field at all.

In logic, ethics, and æsthetics we have, therefore, simply systematic developments of problems primarily belonging to a functional psychology. Or, put conversely, functional psychology, if not estopped, must issue in a logic, an ethics, and an æsthetics. The questions raised by the normative philosophical disciplines are in every instance of vital practical significance for the correct understanding of ordinary psychic activities, and no account of conscious function can disregard them without remaining obviously defective and incomplete.

The view here presented does not rest for its justification upon any special theory

²¹ KANT, *Kritik der Urtheilskraft*, pp. 3-17 (original edition).

²² The dominance of psychological interests in present-day æsthetic writers is well illustrated by two conspicuous books, *i. e.*: HERN, *Origins of Art*, in which five of the first six chapters are devoted to psychological subjects, and GROOS, *Der ästhetische Genuss*, which is from beginning to end largely and avowedly concerned with psychology. In its richness of psychological material FECHNER'S *Vorschule der Aesthetik* furnishes the prototype of these works.

The introduction of æsthetic analyses into psychological treatises is exemplified in the following works: BAIN, *Emotion and Will* (3d ed.), pp. 225-63; SULLY, *The Human Mind*, Vol. II, pp. 133-53; DEWEY, *Psychology*, pp. 309-25; KÜLPE, *Outlines of Psychology* (translation), pp. 250-58.

²³ The best example of this tendency is probably GRANT ALLEN'S *Physiological Æsthetics*, in which he develops certain of Herbert Spencer's doctrines. MARSHALL'S book — *Pain, Pleasure and Æsthetics* — contains excellent critical expositions of these theories.

of the mental elements, either as regards their number or their nature. The psychologist who subscribes to the tripartite division of conscious elements is under no greater obligation to accede to the doctrine than the defender of the bipartite classification. Whatever view of the elements be adopted, a functional psychology must canvass the general processes at present termed cognitive, affective, and conative. In this canvass the questions treated by the normative philosophical disciplines under the head of value must arise, because they are synonymous with the problems of effective functioning. It remains, then, to formulate briefly the relations of functional psychology to metaphysics and epistemology.

By metaphysics I imply any inquiry which undertakes to solve the problem of reality, to ascertain its nature and content. Epistemology, as set over against this, is the problem of the nature and limits of knowledge in its most general and fundamental aspects. It is a familiar observation that metaphysics and epistemology, when thus conceived, are radically opposed to one another. For the metaphysician, who postulates or concludes to a given form of reality, knowledge is already accounted for inside his scheme of reality. On the other hand, the epistemologist has tucked reality—along with unreality—into his little bundle of knowledge, and forthwith the metaphysician is deprived of his patrimony. To be sure, certain of our best modern writers do not concede this mutual antagonism of metaphysics and epistemology, maintaining rather, that the two inquiries are essentially complementary treatments of a fundamental *Welträthscl*.²⁴

It would seem to be fairly clear that epistemology represents an effort to carry out to the last possible point the program of logic in its more inclusive conception.²⁵ From the standpoint of many writers, the psychology of the cognitive processes would seem to be even more intimately connected with such an inquiry than with logic. Psychology professes to investigate primarily the mere facts of cognition, the nature of the knowledge-process taken at its face value, *i. e.*, a process reflecting in some manner a world outside of itself. Epistemology is an inquiry into the ulterior significance and warrant of this process, an examination really of the foundation, upon which rests the tacit assumption in the psychology of cognition, to which we have already referred. This statement is not tantamount to the assertion that epistemological doctrine is itself free from similar tacit assumptions of the nature of the process which it undertakes to examine. On the contrary, it is probably here that we have the clue to the various forms of epistemological theory often classified as sensationalism, rationalism, etc.

Now, it certainly does not require a very flexible interpretation of logic as concerned with a determination of the validity of the thought-process, as involving an analysis of the means of avoiding error and securing truth, to make this discipline

²⁴Cosmological investigations I do not discuss, because, despite the fact that they deserve a separate treatment, they are in their general character offshoots of the metaphysical inquiries, and for our purposes they may be omitted without harm.

²⁵The inevitable entanglement of psychology with logic and epistemology is admirably brought out in a paper by D. G. RITCHIE, entitled "The Relation of Logic to Psychology," *Philosophical Review*, Vol. VI (1897), pp. 1-17.

eventually synonymous with the epistemological inquiry into the ultimate nature of knowledge, and consequently into the ultimate nature of the truth attained by logical procedure. Indeed, it is quite within the limits of conservative statement to say that much of the interest in modern logic is distinctly of an epistemological character, in the sense in which this means that the interest has shifted from a determination of the mere mechanical details of the ratiocinative processes, in which it was chiefly resident during the ascendancy of formal logic, to a determination of the ulterior warrants and implications of the whole cognitive function. Mr. Bradley's definition of judgment as the "reference of an ideal content to a reality beyond the act," is, perhaps, a fair illustration of this disposition to introduce conceptions which belong to an epistemological and ultimate order of problems, in contradistinction to the more immediate and proximate problems involved in the older conceptions of logic. Fortunately it is not necessary for us to pass upon the justice of the criticisms directed at epistemology. The latter may of course prove to be a futile and superfluous undertaking. But the epistemologist has succeeded in formulating a problem whose relations to logic and psychology it is entirely possible to point out. This task is our present business, and we shall be safe in concluding from the foregoing considerations that, if a functional psychology cannot be distinguished in point of content from a logic, it will be equally difficult to draw any sharp line of distinction between epistemology and either logic or psychology. This is evidently but another way of saying that, if one follows with sufficient persistency and thoroughness the question (which comes to light in a functional psychology) of the validity of thought-processes and the mechanism by which they arrive at that which we call truth, one must come upon whatever reply is attainable to the problem of the ultimate nature, warrant, and significance of knowledge.

It is conceivable that all which we have said about psychology and epistemology might be acceded to as a provisional statement, with the reservation that a precisely converse statement would be equally true. This reservation would mean that it answers quite as closely to the facts to view the whole psychological problem as in a sense an outgrowth of the epistemological problem, as to adopt the position which we have presented. A similar, but not identical, contention is often advanced as regards both epistemology and metaphysics, but especially metaphysics, viz., that psychology, like all other would-be natural sciences, rests on a foundation of unexamined assumptions and presuppositions whose criticism and analysis are the peculiar business of these disciplines just mentioned. Now, there is unquestionable warrant for this view, so far as concerns the exposition of the merely logical relations of the problems treated by these several inquiries. Psychology as actually carried on certainly does make such assumptions, and metaphysics undoubtedly does examine them.²⁶ There is, therefore, a possibility of setting forth the relations involved in other ways than those chosen in this paper. This fact, however, confirms, rather than detracts from, the

²⁶ These psychological assumptions and certain points of contact between psychology and metaphysics are succinctly set forth by PROFESSOR JAMES in his *Principles of Psychology*, Vol. I, pp. 183, 184; Vol. II, pp. 569-79.

force of the point which we are interested to make. Start from the psychological standpoint and we insist that you cannot avoid certain functional statements. Once enter upon statements of function, and you cannot, save by purely arbitrary limitation, stop short of a logic, an ethics, and an æsthetics. Furthermore, in the same movement which carries you into logic, you will inevitably find yourself drawn back into epistemology. Nor is this transition accomplished, after the conventionally accepted manner, as a result of merely changing your attitude toward a fixed material. The attitude is one and the same throughout, the attitude of *really* understanding the structure and function of consciousness.

It is, as already indicated, a matter of indifference for the general view set forth in this paper and outlined in the preceding paragraph, what theory one entertains as to the relations of epistemology and metaphysics.²⁷ The metaphysical problem sustains essentially the same relations to the logical and psychological problems of cognition as does that of epistemology. It represents the last step in one direction in the effort at complete rationalization of thought and conduct. It may accordingly be successful or unsuccessful; it may fall within the problem of epistemology on the ground that reality is a category intrinsically subordinate to knowledge; or it may be made to include the epistemological problem on the ground that reality must transcend knowledge, in the sense at least in which this means that reality must contain knowledge as one among other elements. Finally, either problem or both problems may be regarded as insoluble and essentially futile. These alternatives affect us not at all. We are alone concerned to recognize the psychological reality of these problems and to point out that we must inevitably encounter them in any systematic functional psychology.²⁸

At this point the weary reader, reflecting that the rose by any other name would smell as sweet, may well remind us that the doctrine herewith set forth contains, even if true, no practical consequences for the interrelations of the disciplines which we have discussed. That is, however, somewhat too sweeping a statement. Such a view as we have outlined removes, if accepted, once and for all any possibility of regarding the fundamental philosophical sciences as merely incidental to one another. They are, on the basis of this conception, irrepressible outgrowths from a central and basic problem, which we have chosen to designate as the problem of the structure and function of consciousness. They are organic developments of a common root and represent phases, or stages, in the solution of a single complex problem. There need be no fear

²⁷So far as I am aware, the best brief statements concerning the matters under discussion at this point will be found in the following articles: D. G. RITCHIE, "The Relation of Metaphysics to Epistemology," *Philosophical Review*, Vol. III (1894) pp. 14-30; A. SETH, "Epistemology and Ontology," *ibid.*, pp. 568-82; J. DEWEY, "The Significance of the Problem of Knowledge," *University of Chicago Contributions to Philosophy*, Vol. I (1897), No. 3; J. H. TUFTS, "Can Epistemology Be Based Upon Mental States?" *Philosophical Review*, Vol. VI (1897), pp. 577-92. A luminous application of the conceptions of a functional psychology to the field of critical historical interpretation in phi-

losophy is afforded by two of PROFESSOR A. W. MOORE'S papers entitled respectively: "The Functional *versus* the Representational Theories of Knowledge in Locke's Essay," *University of Chicago Contributions to Philosophy*, Vol. III (1902), No. 1, and "Existence, Meaning, and Reality in Locke's Essay and in Present Epistemology," *Decennial Publications of the University of Chicago*, Vol. III (1903). See also PAULSEN, "Introduction to Philosophy," *passim*.

²⁸PROFESSOR LADD, in his *Philosophy of Mind* (page 75), states explicitly that all philosophic problems emerge from the attempt to develop a complete scientific psychology.

of vagueness and confusion as a result of adopting such a view, for the functions with which these several inquiries (ethics, logic, æsthetics, etc.) deal are undoubtedly separable and distinct. The disposition to carry on the investigation of these functions with a measure of independence is thus thoroughly justifiable, and the prevalent practice accordingly finds its warrant, not only in the extrinsic advantages, arising from a division of labor, with its consequent economizing of time and effort, but also in the intrinsic differentiations actually found in the operations of consciousness itself, which these disciplines reflect. Finally, it may be said that in the writer's opinion the position advanced in the present paper is not so much a formulation of a mere program capable, if authorities agree, of being put into effect, as it is a description of tendencies clearly operative in contemporary psychology and philosophy.²⁹ Certainly one can hardly survey the unchecked invasion of ethics, logic, and æsthetics by psychology without recognizing that, however fondly tradition and theory may cling to their existence, the time-honored boundaries between psychology and these sciences have in practice been extensively obliterated. Nor can one pass in review the more important psychological writings of the day without detecting the intrusion into them of investigations, discussions, and theories which, dealing ostensibly with mental functions, trespass in reality upon the preserves of the normative philosophical sciences. If a center of gravity for the detached portions of philosophy be necessary, psychology possesses as a claimant for this honor the notable advantage over its rivals that it is explicitly devoted to the study of the individual as such, from whom all philosophical problems emanate and to whom all solutions of them revert. When this psychological study is interpreted in a functional, as well as in a structural, sense, the theoretical distinctions between psychology and philosophy have ceased to exist.

²⁹ For an interesting statement of a view in many particulars similar to that herein developed, see two articles by JOHN DEWEY, "The Psychological Standpoint," *Mind*, Vol. XI (1886), pp. 1-19; "Psychology as Philosophic Method," *ibid.*, pp. 133-73. See also a criticism of these papers, entitled "Illusory Psychology," by SRADWORTH HODGSON, *ibid.*, pp. 478-94, and PROFESSOR DEWEY's reply, *ibid.*, Vol. XII (1887), pp. 83-8. Professor G. H. Mead has suggestively outlined a theory of the relations among the phi-

losophical sciences, when these are conceived from the functional standpoint, in an article entitled: "Suggestions toward a Theory of the Philosophical Disciplines," *Philosophical Review*, Vol. IX (1900), pp. 1-17. Cf. also CROOM ROBERTSON's valuable paper on "Psychology and Philosophy," *ibid.*, Vol. VIII (1883), pp. 1-21, in which a position is taken, regarding the intimacy of relationship between psychology and philosophy, not wholly foreign to that advanced in this discussion.

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